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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.            | CONFIRMATION NO.       |
|--|-------------|----------------------|--------------------------------|------------------------|
| 10/695,826   | 10/30/2003  | Takayuki Saito       | 2003_1585A                     | 7179                   |
| 513 7590 12/28/2007<br>WENDEROTH, LIND & PONACK, L.L.P.<br>2033 K STREET N. W.<br>SUITE 800<br>WASHINGTON, DC 20006-1021 |             |                      | EXAMINER<br>MARKOFF, ALEXANDER |                        |
|  |             |                      | ART UNIT<br>1792               | PAPER NUMBER           |
|  |             |                      | MAIL DATE<br>12/28/2007        | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/695,826

**Applicant(s)**

SAITO ET AL.

**Examiner**

Alexander Markoff

**Art Unit**

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS; WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 18-28 and 30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-28 and 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/15/07 has been entered.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 18-23, 28 and 30 are rejected under 35 U.S.C. 102(a, e) as being anticipated by Saito et al (US 2003/0041968, US 6,932,884).

Saito et al teach an apparatus as claimed. See entire document, especially

Figures 1, 2A-c, 4A-b and the related description, columns and columns 4-5.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 24 and 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al in view of JP 10-012523.

Saito et al do not specifically teach a gas liquid separator. However, JP 10-012523 teaches that it was known to provide a suction liquid-collecting device with gas-liquid separators and recovering units in order to reduce cross contamination in semiconductor processing apparatuses.

It would have been obvious to an ordinary artisan at the time the invention was made to provide the apparatus of Saito et al with the collecting device of JP 10-012523 in order to reduce cross-contamination of the processing liquids and to recover the used liquids to reduce the operation cost.

8. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al in view of any one of Kobayashi et al (US 6,497,240) and Mitsumori et al (US 6,230,722).

Saito et al teaches an apparatus as claimed except for recitation of a second suction nozzle.

However, it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Moreover, Kobayashi et al and Mitsumori et al teach that providing a suction nozzle to pair with every supply nozzle was known in the art.

It would have been obvious to an ordinary artisan at the time the invention was made to provide a second suction nozzle in to the apparatus of Saito et al in order to

have a separate suction nozzle for the applied chemicals in order to reduce cross contamination of the cross-contamination of the processing liquids.

***Response to Arguments***

9. Applicant's arguments filed 10/15/07 have been fully considered but they are not persuasive.

The applicants again argue that Saito et al do not teach a suction nozzle for sucking a processing liquid on the upper surface of the substrate.

This is not persuasive.

First, it is noted that the claims do not require any vacuum source connected to a nozzle. The claims require a nozzle. Such nozzle is disclosed by the document. Thus even taking the applicants position the discharge is due to gravity the claimed limitations are met by the disclosure of the document.

Second, the examiner would like to state that the applicant's statement regarding gravity is not correct, because without suction the apparatus of Saito et al would not be able as disclosed. However, this analysis would not be conducted in the details because the claims are require only suction nozzle and suction mouth and because the nozzle and the mouth are disclosed by the applied document.

The applicants also allege that Saito et al do not tech a suction mouth facing the upper surface of the substrate.

This is not persuasive because the mouth of nozzle 4, which is formed by parts 2a and 2b is facing both surfaces of the substrate.

At this point the examiner would not provide the discussion regarding whether or it would have been obvious to connect tube 4 to the mouth from the above, since the claims are not limited to such. However, the examiner would to note that the record contains the documents showing that it was known to introduce and to remove treatment fluids by the nozzles provided from the same side, for example Kobayashi et al and Mitsumori et al.

The applicants argue that Saito et al do not teach a suction nozzle at a position forward of the supply nozzle with respect to a rotational direction of the substrate.

This is not persuasive because the claims do not specify from which point the position is "forward".

Any of two point can be considered "forward" depending from the point from where the rotation is started. Such point is not defined by the claims.

It is noted that in Saito et al the treatment fluids are introduced by one nozzle and removed from the rotating substrate by the other nozzle.

It is noted that in the method of the invention the liquid travels on the substrate almost entire circle, while in Saito et al only a short distance between nozzles. However, the instant claims are directed to an apparatus, not a method and are not limited to recite structure to enable the referenced concept.

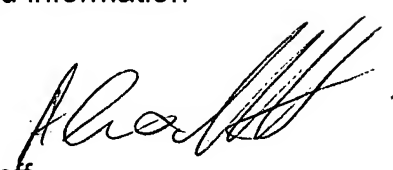
If the applicants would like to further discuss the claims and the rejections with the examiner, the request for the interview would be granted.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Markoff whose telephone number is 571-272-1304. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Alexander Markoff  
Primary Examiner  
Art Unit 1792

AM

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